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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,426	02/11/2004	Michael L. Purdy	ID-455 (80210)	2896

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CHRISTOPHER F. REGAN, ESQUIRE
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST, P.A.
P.O. Box 3791
Orlando, FL 32802-3791

EXAMINER	
MURALIDAR, RICHARD V	

ART UNIT	PAPER NUMBER
2838	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,426	PURDY ET AL.	
	Examiner	Art Unit	
	Richard V. Muralidar	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/11/2004*. +11/15/2004
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103[a] which forms the basis for all obviousness rejections set forth in this Office action:

> [a] A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-33 are rejected under 35 U.S.C. 103[a] as being unpatentable over Wong et al [US 6614206] in view of Mori et al [2003/0137277].

With respect to Claim 1, Wong teaches a battery charger [Figs. 6-10 recharging apparatus 600] comprising: a charger connector [Fig. 6B female USB connectors 602] to be coupled to a corresponding device connector of a portable device [Fig. 9 portable devices 101, 106, 108, 504] including a rechargeable battery [this is implicit to a portable device], the portable device and rechargeable battery each respectfully having a portable device type [Fig. 9 portable device 101 is a laptop computer, 106 is a cell phone, 108 is a printer, 504 is an electric charger] and a rechargeable battery type [each different portable device will implicitly have a different type of rechargeable battery according to the needs of that device] associated therewith from among a plurality of different portable device types and different battery types; a charging circuit connected to said charger connector; and a controller connected to said charger connector [col. 5 lines 10-14; module 702 combines the charging and control circuitry in one aspect, in another aspect the controller is the host PC 101 internal controller in Fig. 8 that supplies and controls power for the individual devices] and said charging

circuit for causing a portable device connected to said charger connector to identify its corresponding portable device type and its corresponding rechargeable battery type, and for causing said charging circuit to charge the rechargeable battery based thereon [Identification at some level is implicitly occurring in Wong's device. Fig. 11 step 1140 states that electrical power is controlled to the device, at the appropriate power level. The charging circuitry/controller 702 would not be able to do this otherwise, across such vastly differing devices as a cell phone and a printer]. Smart chargers and smart batteries with System Management Bus (SMB) communications are known in the art. However, Wong does not go into any detail about how the identification process/communication occurs.

Mori teaches a monitoring system that uses SMB communication means and identifies portable devices [par. 0014 laptops, cell phones] and their rechargeable batteries [par. 0016 lines 1-17; par. 0015 lines 24-30 battery information is taken from a database according to the client identification of the device] for the purpose of monitoring the state of the battery and providing information on maintenance. The SMB means also control the charging function of the battery [par. 0002; par. 0016 lines 1-7].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add a means of device/battery identification to Wong's multi-device charger for the benefit of preventing accidental damage to incompatible device/battery types.

With respect to Claims 2, 16, and 26, Mori teaches that different portable device types [par. 0075 cell phones; par. 0018 electric vehicles] have at least one different portable device charging parameter; wherein different battery types have at least one different battery charging parameter; and wherein said controller [Fig. 2 collectively the power source monitor 4, the battery management means 7 and the power management controller 12 in communication with service handling server 1] selects at least one actual charging parameter to charge the rechargeable battery based upon a comparison of the at least one different portable device charging parameter and at least one different battery charging parameter [Fig. 2 par. 0060-0061 the portable device laptop 2 charges the battery power source device 3 based on inputs such as voltage, temperature, capacity etc.].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the device charging parameter to Wong for the benefit of ensuring positive identification of any connected devices, which would prevent accidental damage to incompatible device/battery types.

With respect to Claims 3, 17, and 27, Mori teaches the controller selects the at least one actual charging parameter based upon a limiting one of the at least one different portable device charging parameter and the at least one different battery charging parameter [par. 0018 a different portable device can be an electric vehicle, with its associated battery and voltage/temperature/capacity parameters. Par. 0075

also shows that cell phones can also be used, in addition to laptops and electric vehicles].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the device charging parameter to Wong for the benefit of ensuring positive identification of any connected devices, which would prevent accidental damage to incompatible device/battery types.

With respect to Claims 4, 18, and 24, Mori teaches the controller further causes the portable device to identify a battery charge level; and wherein said controller further selects the at least one actual charging parameter based upon the battery charge level [par. 0018 parameters can be voltage, temperature, capacity etc.].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the device charging parameter to Wong for the benefit of ensuring positive identification of any connected devices, which would prevent accidental damage to incompatible device/battery types.

With respect to Claims 5 and 19, Mori teaches said controller enters a learning mode for learning the at least one different portable device or battery charging parameter upon receiving a learning mode signal therefrom [par. 0079-0082 the learning mode occurs when the service handling server 1 queries the portable device/laptop on its identity and rechargeable battery status. The server then stores this information].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add a learning mode to Wong for the benefit of ensuring positive identification of any connected devices, which would prevent accidental damage to incompatible device/battery types.

With respect to Claim 6, Mori teaches at least one memory [Fig. 2 memory 9; par. 0020] connected to said controller for storing the at least one different portable device charging parameter and the at least one different battery charging parameter [par. 0079 lines 14-22].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add memory in combination with the learning mode to Wong for the benefit of enhancing positive identification of any connected devices, storing the information for future use, and preventing accidental damage to incompatible device/battery types.

With respect to Claims 7 and 29, Mori teaches at least one actual charging parameter comprises at least one of a voltage parameter, a current parameter, and a charging time [par. 0079 lines 6-10].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the device charging parameters to Wong for the benefit of ensuring positive identification of any connected devices, which would prevent accidental damage to incompatible device/battery types.

With respect to Claims 8 and 30, Mori teaches the controller further provides an error signal to the portable device based upon an unknown portable device type or rechargeable battery type [par. 0068 an abnormal notification would be sent to the portable device if the device ID on record does not match the device that is connected, along with its battery ID on record].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the error indication to Wong for the benefit of alerting the user that the wrong battery might be installed, which could help prevent a hazardous condition].

With respect to Claims 9, 20, and 31, Mori teaches the controller monitors said charging circuit to detect a charging error during charging of the rechargeable battery [par. 0002; par. 0012, par 0058-0065].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the charging detection error (during charging) to Wong for the benefit of alerting the controller/user that the battery either needed to be replaced during charging, or it presented a possible hazardous condition.

With respect to Claim 10, Mori teaches an indicator [Fig. 10 the screen of PC 2 receives the abnormal message] connected to said controller for providing an error indication upon detecting the at least one charging error.

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill

in the art to add the charging detection error (during charging) to Wong for the benefit of alerting the controller/user that the battery either needed to be replaced during charging, or it presented a possible hazardous condition.

With respect to Claims 11, 21, and 32, Mori teaches the charger connector also carries communications signals between the portable device and a host device connected thereto [par. 0014, par. 0015].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the communications means to Wong for the benefit of facilitating smart charging of the device's battery by the smart charger.

With respect to Claims 12 and 22, Mori teaches the charger connector also carries communications signals between said controller and a host device connected thereto [par. 0014; par. 0015].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add the communications means to Wong for the benefit of facilitating smart charging of the device's battery by the smart charger.

With respect to Claims 13 and 23, Mori teaches the communications signals relate to at least one charging parameter [par. 0061 voltage, temperature, capacity etc. is communicated].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill

in the art to add the communications relaying the charging parameter means to Wong for the benefit of facilitating smart charging of the device's battery by the smart charger.

With respect to Claims 14, 24, and 33, Wong teaches the charger connector comprises a universal serial bus (USB) connector [Fig. 6B USB connectors 601, 602; both Wong and Mori use devices that have USB connectors, such as the laptop, cell-phone, etc.].

With respect to Claim 15, Wong teaches a battery charging system comprising: a portable device [Fig. 8 laptop computer 101] comprising a device connector [the laptop's USB connector] and including a rechargeable battery, the portable device and rechargeable battery each respectfully having a portable device type and a rechargeable battery type associated therewith from among a plurality of different portable device types and different battery types [Fig. 9 portable device 101 is a laptop computer, 106 is a cell phone, 108 is a printer, 504 is an electric charger, and each has its own type of rechargeable battery] ; and a battery charger [Figs. 6-10 recharging apparatus 600] comprising a charger connector to be coupled to said device connector [Fig. 6B female USB connectors 602], a charging circuit connected to said charger connector, and a controller connected to said charger connector and said charging circuit [col. 5 lines 10-14; module 702 combines the charging and control circuitry in one aspect, in another aspect the controller is the host PC 101 internal controller in Fig. 8 that supplies and controls power for the individual devices] for causing the portable device to identify its corresponding portable device type and its corresponding rechargeable battery type, and for causing said charging circuit

to charge the rechargeable battery based thereon. [Identification at some level is implicitly occurring in Wong's device. Fig. 11 step 1140 states that electrical power is controlled to the device, at the appropriate power level. The charging circuitry/controller 702 would not be able to do this otherwise, across such vastly differing devices as a cell phone and a printer]. Though smart chargers and smart batteries with System Management Bus (SMB) communications are known in the art, Wong does not go into any detail about how the identification process occurs.

Mori teaches a monitoring system that uses SMB communication means and identifies portable devices [par. 0014 laptops, cell phones] and their rechargeable batteries [par. 0016 lines 1-17; par. 0015 lines 24-30 battery information is taken from a database according to the client identification of the device] for the purpose of monitoring the state of the battery and providing information on maintenance. The SMB means also control the charging function of the battery [par. 0002; par. 0016 lines 1-7].

Wong and Mori are related art as both teach devices that supply rechargeable batteries. At the time of the invention it would have been obvious to one of ordinary skill in the art to add a means of device/battery identification to Wong's multi-device charger for the benefit of preventing accidental damage to incompatible device/battery types.

With respect to Claim 25, Mori teaches a battery charging method [encompassed by Figs. 6-10 recharging apparatus 600] for a rechargeable battery carried by a portable device, the portable device and rechargeable battery each respectfully having a portable device type and a rechargeable battery type associated

therewith from among a plurality of different portable device types and different battery types, the method comprising: coupling a device connector of the portable device to a corresponding charger connector; connecting a charging circuit to the charger connector; and causing the portable device to identify its corresponding portable device type and its corresponding rechargeable battery type via the charger connector, and causing the charging circuit to charge the rechargeable battery based thereon [the limitations of this claim have previously been met, by the preceding claims 1 and 15].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art [US 6809649] by Wendelrup is cited for the disclosure of a method and apparatus for communication between an electronic device and a connected battery, including identification of the battery. Prior art [US 6154006] by Hatanaka is cited for the disclosure of a battery rental system that has a communication and identification system for rechargeable device batteries. Prior art [US 6456037] by Jaki is cited for the disclosure of a battery charger that can quickly identify a connected battery pack for recharging purposes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard V. Muralidar whose telephone number is 571-272-8933. The examiner can normally be reached on Monday to Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on Monday to Friday 8-5. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RVM
3/03/2006

DAVID M. GRAY
PRIMARY EXAMINER